REMARKS

Claim 1 is pending in the present application. Claims 2-6 have been cancelled without prejudice or disclaimer to the subject contained therein.

A. Rejection under 35 U.S.C. §101

Claims 1-6 have been rejected under 35 U.S.C. §101 as being non-statutory. This rejection is respectfully traversed.

As set forth above, amended independent claim 1 recites a method which constructs a filter to eliminate moiré from a rendered image. Constructing a filter is a useful process. Moreover, the filter provides a useful and tangible result, namely a moiré free rendered image.

Therefore, the method recited by amended independent claim 1 meets the statutory requirements of 35 U.S.C. §101.

Accordingly, in view of all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the present rejection under 35 U.S.C. §101.

B. Rejection under 35 U.S.C. §112, First Paragraph

Claims 1-6 has been rejected under 35 U.S.C. §112, first paragraph, for failing to set forth a specific utility. This rejection is respectfully traversed.

As set forth above, amended independent claim 1 recites a method which constructs a filter to eliminate moiré from a rendered image. Constructing a filter is a useful process. Moreover, the filter provides a useful and tangible result, namely a moiré free rendered image. Lastly, paragraph **[0002]** of the above-identified published patent application states that the invention constructs a filter to eliminate moiré from a rendered image.

Therefore, the method recited by independent claim 1 and the specification meet the statutory requirements of 35 U.S.C. §112, first paragraph.

Accordingly, in view of all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the present rejection under 35 U.S.C. §112, first paragraph.

A. Rejection under 35 U.S.C. §103

Claims 1-6 have been rejected under 35 U.S.C. §103 as being unpatentable over the document entitled Wilkinson (US-A-6,018,596) in view of Williams et al. (US-A-5,751,862). This rejection is respectfully traversed.

It is respectfully noted that the Examiner has rejected the claims over art which is not officially part of the record. More specifically, Wilkinson (US-A-6,018,596) and Williams et al. (US-A-5,751,862) are not cited on the PTO-1449 or the PTO-892. The Examiner is respectfully requested to rectify this error and correctly cite Wilkinson (US-A-6,018,596) and Williams et al. (US-A-5,751,862) on a PTO-892.

In formulating the rejection, the Examiner alleges that Wilkinson teaches all the method except for subtracting HPP from ONE to create matrix HPPinv. To meet this deficiency in the teachings of Wilkinson, the Examiner proposes to modify the teachings of Wilkinson with the teachings of Williams et al. The Examiner alleges that Williams et al. teaches subtracting HPP from ONE to create matrix HPPinv.

From these allegations, the Examiner concludes that the presently claimed invention would be obvious to one of ordinary skill in the art with respect to the teachings of Wilkinson in view of the teachings of Williams et al. These allegations and conclusion are respectfully traversed.

As respectfully submitted above, amended independent claim 1 recites a method for designing filters that approximates the circularly symmetric frequency response achievable using a non-separable filter. The method selects a cut-off frequency and designing therefrom a one-dimensional separable low pass filter (LP), LP being a row vector having entries $[X_{-n}, X_{-(n-1)}, \ldots X_0, \ldots X_{n-1}, X_n]$; obtains a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}; generating a two-dimensional contour plot for the two-dimensional filter LPP; designs a one-dimensional

separable high pass filter (HP), HP being a row vector having entries [Y_{-m}, $Y_{-(m-1)}$, ... Y_0, ... Y_{m-1}, Y_m]; obtains a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions: {2m+1, 2m+1}; generates a two-dimensional contour plot for the two-dimensional filter HPP; generates a two-dimensional filter (ONE) when the two-dimensional contour plot for the two-dimensional separable filter LPP overlaps the two-dimensional contour plot for the two-dimensional separable filter HPP, ONE having the same dimensions of HPP with the only non-zero entry of value 1 being located at the center of ONE; subtracts HPP from ONE to create matrix HPPinv; convolves LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}; generates a two-dimensional contour plot for DSCRN; and constructs a filter to eliminate moiré in a rendered image when the two-dimensional contour plot for DSCRN is an approximation to a desired circular symmetry the filter being constructed of LLP and HHP.

With respect to Wilkinson, contrary to the Examiner, Wilkinson fails to teach, disclose, or suggest the obtaining of a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}. More specifically, the Examiner points to column 4, lines 6-13, of Wilkinson to support the Examiner's allegation that Wilkinson discloses the obtaining of a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}.

Column 4, lines 6-13 of Wilkinson states:

> Thus, from the source input image frame, four separate full-resolution frames are produced, LL1 having low frequency horizontal and vertical components, LH1 having low frequency horizontal components and high frequency vertical components, HL1 having high frequency horizontal components and low frequency vertical components and HH1 having high frequency horizontal and vertical components.

It is clear from the text, set forth above, that this passage of Wilkinson is focused on full-resolution frames of data, not obtaining a filter. Thus, Wilkinson fails to teach, disclose, or suggest the obtaining of a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}.

Moreover, contrary to the Examiner, Wilkinson fails to teach, disclose, or suggest the obtaining of a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions given by: {2m+1, 2m+1}. More specifically, the Examiner points to column 4, lines 6-13, of Wilkinson to support the Examiner's allegation that Wilkinson discloses the obtaining of a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions given by: {2m+1, 2m+1}.

It is clear from the text, set forth above, that this passage of Wilkinson is focused on full-resolution frames of data, not obtaining a filter. Thus, Wilkinson fails to teach, disclose, or suggest the obtaining of a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions given by: {2m+1, 2m+1}.

Lastly, contrary to the Examiner, Wilkinson fails to teach, disclose, or suggest the convolving of LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}. More specifically, the Examiner points to column 6, lines 45-49, of Wilkinson to support the Examiner's allegation that Wilkinson discloses the convolving of LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}.

Column 6, lines 45-49 of Wilkinson states:

> Although the transfer function should vary between substantially zero and unity gain, it is not limited to the specific function given above and could include other functions such as $\sqrt{(1-e^{-x^*k})}$, which has the effect of steepening the initial rise from zero, or sin (x*k) in the range -90° to 90°.

It is clear from the text, set forth above, that this passage of Wilkinson is focused on a transfer function, not convolution. Thus, Wilkinson fails to teach, disclose, or suggest the convolving of LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}.

With respect to Williams et al., Williams et al. fails to teach, disclose, or suggest obtaining of a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}; obtaining of a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions given by: {2m+1, 2m+1}; and/or convolving of LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}.

Therefore, since both Wilkinson and Williams et al. fail to teach, disclose, or suggest obtaining of a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}; obtaining of a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions given by: {2m+1, 2m+1}; and/or convolving of LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}; the proposed combination of Wilkinson in view of Williams et al. fails to teach, disclose, or suggest obtaining of a two-dimensional filter LPP by performing the operation: LP* X LP, LP* being a column vector having the same entries as LP, LPP having dimensions given by: {2n+1, 2n+1}; obtaining of a two-dimensional filter HPP by performing the operation: HP* X HP, HP* being a column vector having the same entries as HP, HPP having dimensions given by: {2m+1, 2m+1}; and/or convolving of LPP with HPPinv to obtain DSCRN having dimensions: {2m+2n+1, 2m+2n+1}.

Accordingly, in view of all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the present rejection under 35 U.S.C. §103.

CONCLUSION

Accordingly, in view of all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw all the present rejections. Also, an early indication of allowability is earnestly solicited.

Respectfully submitted,

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